

ITEM: 7

SUBJECT: Bear Valley Water District, Wastewater Treatment Facility, Alpine County

BOARD ACTION: Consideration of NPDES Permit Renewal and Time Schedule Order (TSO)

BACKGROUND: The Bear Valley Water District (Discharger) is the owner and operator of the Wastewater Treatment Facility (Facility) that serves a population of approximately 133 permanent residents, plus thousands of seasonal residents and tourists. The Discharger provides sewerage service to the community of Bear Valley, the Bear Valley Ski Resort, and Lake Alpine/United States Forest Service in Alpine County. The Facility consists of a 12.5 million gallon aerated treatment pond, a chlorine contact tank, and a 106 million gallon storage/polishing reservoir. Effluent from the reservoir is disposed of by spray irrigation. Spray irrigation is limited to the summer months (usually June through October) and is regulated through separate Waste Discharge Requirements Order 5-01-208. The Facility has not had a surface water discharge in over 11 years. The Facility is permitted to discharge up to 2.5 million gallons per day, but only if there is a 20:1 dilution ratio in Bloods Creek, the receiving water, and when the storage/polishing reservoir is at least two-thirds full. Bloods Creek is tributary to the North Fork Stanislaus River.

The tentative Orders issued for public review included a permitting alternative to include tertiary treatment requirements. The existing permit (Order R5-2005-0139) included a time schedule for the Discharger to install tertiary treatment facilities. However, on 3 March 2011 the Department of Public Health (DPH) submitted a letter that indicated tertiary treatment would not be recommended provided certain requirements were included in the permit. Based on the recommendation of DPH and the associated permit requirements, the tentative permit alternative to implement tertiary treatment requirements has been removed from the Agenda package.

The proposed NPDES Permit includes new effluent limitations for (1) aluminum and ammonia based on interpretation of Basin Plan narrative objectives, and (2) copper and lead in accordance with the California Toxic Rule and the State Board's State Implementation Plan. In addition, the proposed NPDES Permit includes a compliance schedule for ammonia and aluminum in accordance with the State Boards Compliance Schedule Policy for NPDES Permits. The Discharger is unable to immediately comply with the new limits for copper and lead therefore, a separate TSO is proposed to provide interim effluent limits and a time schedule for copper and lead.

ISSUES: Public comments were received from the Discharger, California Sportfishing Protection Alliance (CSPA), Central Valley Clean Water Association (CVCWA), and the Stockton East Water District (SEWD). In addition, 62 letters were received from ratepayers and residents of the Discharger's service area in support of the proposed NPDES Permit. The following is a summary of the comments on the major permitting issues and Central Valley Water Board staff responses. Detailed comments and responses are included in the Staff Response to Comments document included in this agenda item.

Effluent Limitations for Aluminum, Copper, Lead, and Ammonia. The Discharger requested that the Board re-consider proposed effluent limits for aluminum, copper, lead, and ammonia.

For aluminum, the Discharger and CVCWA commented that the results of recent Water Effect Ratio (WER) studies done by other communities should be used to base the aluminum effluent limits on the criterion of 750 µg/L instead of the chronic criterion of 87 µg/L. The environmental conditions and wastewater characteristics are not similar enough to justify using the other WER studies. Staff modified the proposed permit to include a reopener provision in the event the Discharger conducts a site-specific aluminum toxicity study and/or WER study.

For copper and lead, the Discharger and CVCWA commented that the final effluent limits should be calculated using the receiving water hardness fraction at an effluent fraction of 5% since discharge is only permitted under a 20:1 dilution ratio. This would require the allowance of a mixing zone and cannot be allowed at this time. The proposed permit has been modified to include a reopener provision to allow the permit to be opened in the event the Discharger conducts a mixing zone study for copper and/or lead.

For ammonia, the Discharger requested and CVCWA commented that the maximum effluent limit for pH should be 8.0 and the effluent limits for ammonia should be re-calculated based on a pH of 8.0. The Discharger has not adequately demonstrated that compliance with a maximum pH limit of 8.0 can be attained. A reopener provision has been added to the proposed permit that would allow the permit to be opened to modify the pH effluent limit and ammonia effluent limits should the discharger provide new information justifying the lower pH limit.

Numeric WET Chronic Toxicity Trigger. The Discharger and CVCWA requests that the Board re-consider the proposed chronic toxicity trigger of 1 chronic toxicity unit (TUc) and requests that the chronic toxicity trigger be set at 20 TUc since discharge to Bloods Creek is only permitted when there is a 20:1 dilution ratio. The requested change requires a mixing zone. The proposed Order has been modified to include a reopener provision to allow the permit to be opened in the event the Discharger conducts a mixing zone study for chronic toxicity.

Compliance Schedules in the Proposed Permit and TSO. The Discharger and CVCWA commented that some compliance schedule tasks and corresponding due dates included in the proposed permit for aluminum and ammonia, and in the TSO for copper and lead are too restrictive and do not provide flexibility. Also, some of the tasks are dependent upon possible compliance project options that have not yet been determined. Staff concurs and the compliance schedules in proposed permit and TSO have been changed to allow flexibility in compliance options.

Secondary Treatment vs Tertiary Treatment. The Discharger and numerous residential ratepayers provided comments supporting the proposed Order requirement of secondary treatment and opposed the tertiary treatment alternative. Based on a recommendation of the DPH, the proposed Order requires secondary treatment for the protection of public health and the tentative permit alternative to implement tertiary treatment requirements has been removed from consideration.

Incomplete Report of Waste Discharge. CSPA commented that the proposed permit is incorrect in stating that “effluent” was used to conduct the reasonable potential analysis (RPA). The proposed permit has been modified to clarify throughout the Fact Sheet that when the term “effluent data” is used it is referring to the water quality data collected from the storage/polishing pond, not actual effluent data when discharging to Bloods Creek. This data is used to determine the receiving water quality under critical conditions. CSPA also commented that the samples taken at the surface of the storage/polishing pond may not be representative of the discharge. The discharge system is designed to draw water from the surface of the pond. It is therefore appropriate to characterize the discharge by collecting water quality samples near the surface. CSPA also comments that constituents of emerging concern (CECs) have not been addressed in the proposed permit. The State Water Board is currently working to develop a monitoring program for these constituents. It is premature to include the monitoring at this time.

Effluent Limitations for pH. CSPA comments that the proposed permit fails to include an effluent limitation for pH; pH is not a conservative constituent and use of the effluent limitation equation for conservative constituents is not appropriate. CSPA additionally comments that the Central Valley Water Board has not conducted any mixing zone analysis for pH. Staff agree that water quality-based effluent limits (WQBELs) for pH are needed and have been added to the proposed permit, based on the Basin Plan’s water quality objective for pH. A reopener provision has been added to allow the removal of the WQBELs for pH, should the Discharger conduct a study that adequately demonstrates the discharge causes no reasonable threat to exceed the Basin Plan water quality objectives in Bloods Creek.

Municipal and Domestic Beneficial Uses of Receiving Stream. CSPA comments that the proposed permit is not protective of the Municipal and Domestic Beneficial Uses of the receiving stream and that tertiary treatment is deemed necessary to protect the designated beneficial uses of food crop irrigation and contact recreation within the receiving stream. There are no numeric water quality objectives for pathogens for the protection of MUN. Therefore, the Central Valley Water Board, when developing NPDES permits, implements recommendations by DPH for the appropriate disinfection requirements for the protection of MUN, as well as REC-1 and AGR. The disinfection requirements in the proposed Order implement DPH’s site-specific recommendations and are fully protective of the beneficial uses of the receiving water. A more in depth response is included in the Response to Comments document in the agenda package.

Anti-Backsliding Requirements and Antidegradation Analysis. CSPA comments that the anti-backsliding requirements and antidegradation analysis in the proposed permit is not adequate. However, the proposed permit includes language that fully addresses anti-backsliding requirements and antidegradation analyses.

SEWD Comment. SEWD commented that based on information provided, the recommendation of the DPH, and discussions with the Discharger’s engineer, SEWD will forgo its previous request for tertiary treatment during adoption of the existing permit, based on inclusion of several discharge requirements. The proposed permit includes all, but one of the requirements requested by SEWD. A shorter discharge period was requested (i.e., April – June). Due to concerns about

warm spring rains, the discharge may need to occur in the months of January through March. The proposed Order includes several prohibitions that effectively shorten the discharge season, but the Discharger requested the operational flexibility to discharge if needed.

Mgmt. Review _____

Legal Review _____

5 August 2011

11020 Sun Center Dr. #200

Rancho Cordova, CA 95670